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# WOODLOT TIPS



Photo: Creative Commons

## FALL 2015

### Programs

**Friday, January 8, from 1–3:30 p.m. — Timber Harvest Tour at Molly Stark State Park**

Tim Morton, State Forester, FP&R, and Long View Forest Contracting, will lead a tour of an active timber harvest using a combination of harvest machine felling and hand cutting designed to improve snowshoe hare habitat while being sensitive to trails and park infrastructure. **Dress for winter conditions; bring snowshoes.**

*RSVP to [tim.morton@vermont.gov](mailto:tim.morton@vermont.gov) so he can reschedule in case of bad weather or if the job hasn't started yet.*

**Saturday, February 20, at 10 a.m. — Winter Tree ID Walk and Potluck Lunch**

County Forester Bill Guenther will lead a winter tree identification walk on Ballou Mountain in Halifax, VT. Ballou Mountain has an interesting diversity of hardwood and coniferous trees. **Bring your snowshoes**, as the north slope of Ballou Mountain typically has snow well into April. Non-snowshoers are welcome to come inside to sip hot cider and talk about trees.

Please e-mail [LindaALyon@gmail.com](mailto:LindaALyon@gmail.com) or call (802-368-2211) **by February 17** if you plan to attend. Parking is *very* limited, so it may be necessary for people to carpool in four- or all-wheel drive vehicles to get up the steep driveway. When you contact Linda, please let her know how many people you will be coming with; whether you have a suitable vehicle for the driveway and, if so, if you are willing to provide rides; what town you will be coming from; whether you plan to stay for the potluck; and your contact information.

Given that we expect deep snow and we will be on a hill, the activity level is moderate. But we will stop often to look at trees, so it will not at all feel like a forced march. If you have never been on snowshoes, don't let that discourage you. If you can walk, you can snowshoe. If you prefer to use poles, please bring them. This is a family-friendly event, and friendly dogs are also welcome.

**Friday, March 4, at 7 p.m. — The Birds in Your Woods: How You Can Help Them**

Co-sponsored by the Southeastern Vermont Audubon Society

An Illustrated Presentation by Dr. Robert E. Engel

Marlboro College Professor Emeritus of Biology.

Vermont Learning Collaborative, 471 Route 5, Dummerston

For further info: Arthur Westing (387-2152; [westing@sover.net](mailto:westing@sover.net))

**Saturday, March 19 — SAVE THE DATE — Annual Sugarhouse Tour**

**Saturday March 19 — WRWA Members Only Field Trip — Somerset Old Growth Forest Tour**

County Forester Bill Guenther will lead a tour to a Somerset woodlot in what we believe to be a stand of old growth, which consists mostly of yellow birch. This 60-acre property was a gift to Leland & Gray High School many years ago. About 12-15 acres of this property are stocked with the big birches, the remainder in spruce/fir and beaver flowage. We offer this trip only to WRWA members and the group size is limited to 12. **Bill will need to hear from you by March 15<sup>th</sup>** if you are interested in going. We need a minimum of five folks to sign up for the trip, so please contact Bill by phone or email to let him know you want to sign on.

We will meet in West Brattleboro at 9:30 a.m. to car pool as parking can be very limited out there in the winter. We will travel 1.5 miles up the Old County Road to the western edge of the property, then bushwhack east out to the old growth. **We recommend that people bring a combination of skis and snowshoes: skis for the road and snowshoes for the bushwhack woods where brush complicates movement on skis. So take your pick, but Bill probably will bring both.**

At about lunchtime, we'll stop at the campsite and have a picnic lunch. It will be a nice warmup if you also bring a thermos of your favorite hot beverage. After lunch we'll head out into the birch stand and look at these magnificent specimens; many are well over three feet in diameter.

We hope to conclude our day by about 3 p.m. Keep in mind that Somerset is the icebox of Windham County, and even though the trip will take place in March, we could easily have some pretty severe winter conditions, so dress warmly and in layers. We want to assure a safe and enjoyable day for everyone.

**You need to call Bill Guenther at 257-7967 X 305 to reserve a spot, get the specific meeting place, and to make sure you've got the right gear.** This trip is moderate to somewhat strenuous, and we'll be a long way from anywhere. Bill also needs to ensure that the private road up to the dam has been plowed. Adverse road conditions could cause us to cancel. Spring comes very late out there!

**Saturday, April 23, at 8:45 a.m. — Excursion to the Harvard Forest in Petersham, Massachusetts**

We will have time to tour a small part of the 3,500-acre research forest, as well as view the amazing set of handmade dioramas that depict the New England landscape and forest as it changes through time. Only a one-hour drive from Brattleboro.

**Details:** Meet at Exit 1 Outlet Center in Brattleboro at 8:45 a.m. for carpooling. Video and dioramas, 10-11:30; indoor picnic lunch (bring your own); tour of the forest from noon to 2:00 p.m. or so, back by 3:30. We will keep to moderate terrain.

(WRWA may ask for donations to defray the cost of the visit; more in Winter newsletter.)

**Monday, May 23, at 7 p.m. — Our Riparian Woodlands: On Managing this Very Special Habitat**

David L. Deen, Vermont State Representative,  
Chairman, House Committee on Fish, Wildlife, & Water Resources  
Upper Valley River Steward, Connecticut River Watershed Alliance  
Vermont Learning Collaborative, 471 Route 5, Dummerston  
For further info: Arthur Westing (387-2152; [westing@sover.net](mailto:westing@sover.net))

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**Help Wanted:**

The Windham Regional Woodlands Association is powered by a cadre of volunteers who serve on various committees. Most of the committee members are on the Board of Trustees. However, Board membership is not a prerequisite for committee membership.

The Board extends an invitation to WRWA members to participate in any of the following commit

tees: Program, Nominations, Membership and Finance, Newsletter, Website, Library, and Scholarship. WRWA would benefit by an infusion of your energy and new ideas. If you are interested, please email [windhamwoodlands@gmail.com](mailto:windhamwoodlands@gmail.com), listing your interests. Carol Morrison, WRWA Clerk, will forward your information to the appropriate Committee Chairs, who will then contact you.

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**President's Column**

*By Sam Rowley*

As the leaves collect on the ground, fall is upon us. These leaves represent a full summer's portion of light energy. This almost magical feat takes light, something we can't touch, and transforms it, with the addition of a few elements into something that floats to the ground every autumn. The leaves collect on the ground and add another layer of nutrients to the forest floor. We humans often overlook this fantastic transfer of nutrients as a burden requiring raking and disposing. But without these gifts from nature the forest would not exist as we know it.

Some trees seem to be in denial about the season change. Oaks and beeches tend to hold their leaves longer than their neighboring trees. This is termed "tardily deciduous," just in case you want to impress your friends. These trees do eventually drop

their leaves as the temperatures become colder and time progresses into the winter. Beech and especially oak trees make raking the yard in one shot almost impossible, as most maples, ash, and birch are early to shed their leaves.

Before the leaves drop and cover the ground, they create a spectacular visual display. This year's conditions made for an especially beautiful leaf season. For a few weekends, the roads were plugged with tourists and natives alike. Remember, these visitors are important to Vermont's local businesses that rely on these weekends to bring in needed revenue.

Some other visitors are quite evident this time of year as well. Introduced plants, or invasives, came as visitors but have proven to be more harmful

than friendly. Invasive plants can outcompete native plants. They displace and reduce native populations, causing food and habitat problems for associated wildlife. Invasive plants are not native and often seem to be out of sync with the native population. Japanese barberry (*Berberis thunbergii*) tends to hold its small leaves and fall color longer than the surrounding plants. Burning bush (*Euonymus alatus*) also holds its leaves later than the surrounding native plants. This characteristic of keeping leaves allows these invasive plants to capture a little more energy before going dormant for the winter.

These plants also tend to be some of the first to break bud in the spring and produce leaves. Both plants are prolific seeders and we can attribute their spread to their production of large quantities of fruit and seed. The seed, usually low in nutritional value, is eaten by birds and spread far and

wide. These characteristics often give invasives a competitive edge against native plants. The lingering and pretty foliage are tempting but dangerous to keep around.

Autumn is also the start of hunting season. Please be conscientious when walking out in the woods by wearing clothing that makes you more visible. Hunting your land or allowing others to hunt can help control the deer population and create a positive benefit to our state's woodlands. Pressure from deer over-browsing on young saplings can significantly reduce the growth of a forest. Deer prefer our native species, so it is the invasive plants that thrive in high deer populated areas.

I hope you are having a great autumn while we wait for the snow to blanket the landscape.

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## WRWA is Seeking a Newsletter Editor

*By Bill Guenther, Windham County Forester*

The Windham Regional Woodlands Association sends out a quarterly newsletter, *Woodlot Tips*, that is always well received by our membership. In past questionnaires to our membership, the newsletter always ranks at or near the top of what folks like about our organization. To produce this newsletter, requires a good editor at the helm who can edit articles and then lay out the newsletter on some sort of word processing program or a desktop publishing program.

Barbara Evans of Dummerston has been our faithful newsletter editor now for over 10 years. After

these many years of great service to WRWA, Barbara would now like to take a break and pass the torch. We are asking someone in our membership to consider taking on this very important role for our association.

Our organization exists as an almost entirely volunteer driven association and we are hopeful that someone will step up to the plate and offer their services to assume the editorship of the newsletter. If you have any questions about this position please feel free to contact Barbara Evans at: [bse-bird@hotmail.com](mailto:bse-bird@hotmail.com).

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## Big Tree Tour 2015

*by Margaret MacDonald*

On the morning of Saturday, November 7, an eager and highly congenial group of 24 people set out from the BUHS parking lot to follow County Forester Bill Guenther on visits to some very impressive trees. Our first stop was the state champion cucumber magnolia (*magnolia acuminata*), wedged into a small area behind Abiatti Monuments off South Main Street in Brattleboro. One would never expect to find a champion tree in that location: the tree grows on a tiny island of green, surrounded by a concrete parking area and several

buildings. The tree, unusual in Vermont (it's native to Tennessee and North Carolina), has a large crown in relation to the trunk diameter, but the roots are obviously constrained by its enclosed urban setting. The tree exhibits several branch stubs where dead limbs were pruned, and has mushrooms growing on the roots and on part of the trunk, which may indicate that the tree has heart rot. Still, it apparently grew some six inches last year, which indicates it is in reasonable health.

The tree's location gave Bill his first opportunity of the day to mention the "root-to-shoot" ratio — the balance in biomass between the above- and below-ground portions of a tree. He explained that trees have to expand their root zone to grow taller, but can grow broader even if the root zone remains static, which accounts for the large circumference of many of the open grown trees we visited.

Next, we visited the state runner-up white oak (*quercus alba*) on the Zehnbauer property off Putney Road. This tree, too, had had some larger limbs pruned, and Bill pointed out the ring of brownish cells surrounding several of the pruning wounds (one of which had closed entirely); this callusing is actually a sign of the tree's vigor. However, in several cases the pruning had gone too deep and hit the collar cells around the limbs, and these wounds had not healed completely. Like the cucumber magnolia, the oak had mushrooms growing on the roots; these are new since Bill last visited the tree, and may again indicate some rot.

Putney Road seems to nourish big trees: the state champion silver maple (*acer saccharinum*) is only about a mile away, next to Aspen Dental and directly opposite Hannaford's. The huge, multi-stemmed maple is on one of the few remaining pieces of private property on that portion of Putney Road, which is zoned for commercial development. The house has been on the market for several years, and throughout that time WRWA members have worried that a commercial buyer would cut the tree because it takes up so much space. However, it seems that the property has been sold to a private individual who wants to preserve the tree.

The history of this tree is unusually well documented. The house, owned by the Tyler family (the current owner is Betty Tyler Chickering) was built in 1900, and in that year one of the construction workers pulled up a silver maple seedling from the bank of the Connecticut River and planted it in front of the house. The seedling would probably have been about 10 years old at the time, so we know that the tree is approximately 125 years old. Silver maples grow very fast; in some trees the growth rings may measure an inch. However, the wood is very brittle. This tree, like most of the other trees on this year's tour, is open grown, which favors a wide branching habit; unfortunately, that can lead to weak junctions between the limbs and the trunk and makes the tree

susceptible to damages. The tree has some cabling to hold the branches together; Bill noted that cables should be monitored every five years or so and adjusted if necessary.

We then drove to Dummerston to visit the state runner-up butternut (*juglans cinerea*). The enchanting Esther Falk, who had welcomed WRWA members on many of our previous tours, had passed away in February of this year, but her daughter, Karen Falk Sugden, greeted us warmly and told us how the tree had been a presence throughout her life and how much it had meant to her late mother and still means to her. The tree may owe some of its impressive characteristics to its location on a finger of the Waits River geologic formation, whose soils are very high in calcium. While the tree does have the canker that has devastated the butternut species, it is growing so rapidly that it "outgrows" the canker, and actually looks healthier than it did a few years ago. Because of its apparent resistance, Bill and researchers from the University of Vermont are following this tree and another relatively resistant butternut in Halifax, and hope that they can determine the characteristics of these trees that enable them to withstand the disease. Even so, Bill noted that butternuts might be put on the endangered species list. (*For a story about how our 2009 tour helped to "keep the tree together," see the Winter 2014 issue of Woodlot Tips.*)

Our next stop was in Putney, where we visited River Myrddin's "Grandmother Birch" — the state's runner-up paper birch (*betula papyrifera*). Only a few weeks earlier this tree had undergone severe pruning to remove dead branches, and several enormous limbs still lay on the ground surrounding the tree. Bill noted that the tree is probably nearing the end of its life span; paper birches generally live around 75 years, or to 100 at the most. The tree has an enormous circumference for a paper birch, but because of its location next to a ledge and a house, the tree's roots are blocked, which means that root zone could not keep up with the tree's growth. The tree was also damaged during the ice storm of 1998, which hit trees on east-facing slopes especially hard. Still, the tree seems vigorous; Bill pointed out the amount of exfoliation, or naturally peeling bark, on some of the limbs, which indicates the tree is growing quickly. This tree, too, may owe its enormous girth to its location on the Waits River formation.

Our group paused for lunch in Putney Village, congregating in and around the Putney General Store and chatting happily about the tour so far. We then drove to Westminster to pay our respects to the state's newly crowned champion sugar maple (*acer saccharum*), next to Sojourns Community Health Clinic. The tree has been regularly cared for by arborists Godfrey Renaud and Kevin Shrader. Bill noted that the tree has relatively smooth bark, which means it is probably around 100, but certainly no more than 125, years old. The tree might benefit from soil liming; it is quite close to Route 5, and could suffer from the runoff when the road is salted during the winter.

The discovery of this new champion some six months ago may help the Virkstis family to make a difficult decision. Their property in Dummerston hosts the former champion, which unfortunately is in such poor condition that a high wind could bring it down and destroy their home. As we described in the Winter 2014 issue of *Woodlot Tips*, the center of the tree is almost entirely rotted out, and the existing cabling may not be strong enough to hold the sections of the tree together. Although parting with the tree would be difficult in any circumstances, perhaps the knowledge that they would not be cutting the state champion will lessen the pain.

For our last visit of the day, we drove to the Windmill Hill Pinnacle Association's trailhead and hiked to the state champion white ash (*fraxinus americana*). Unlike the other trees on this tour, the champion ash is in the midst of a forest, which may explain why it is by far the tallest tree on this year's tour. As we swished through the leaves that covered the trail (as well as the occasional branch, rock, and unexpected dip in the ground), we had an opportunity to see many large outcroppings of the Waits River formation that nurtures several of our champion trees, with its distinctive brownish color and smooth texture.

Bill also pointed out some buckthorn that had been taken down by the cut stump method, and noted that simply dabbing herbicide on the outer edges of the stumps with a sponge seems to deter some

95 percent of resprouting; it is not necessary to paint the entire stump. Such treatment should be applied in the fall, when the plant is drawing in nourishment and therefore sucks in the herbicide; in the spring the plant is expanding and would simply push the herbicide out. When we reached the ash, Bill drew our attention to two large (and smelly) fungi growing on the roots that had not been there 15 months ago; these likely indicate the presence of root rot. Ash does not compartmentalize infections well, so this could spell trouble. Furthermore, Bill suspects that the tree suffered damage during the ice storm and may also be fairly hollow.

The ash is not only tall, but also has a broad branch spread, indicating that it was open grown. In addition to impressively large limbs, the tree exhibits many knobs that mark where branches used to be. Bill explained that ash trees are excellent self-pruners: they tend to shed their lower branches as they gain height, and the stubs close so well that they are practically invisible. Thus, the obvious knobs may indicate some unhealthy process.

The tree is probably between 150 and 175 years old. This suggests that long-ago owners probably cleared the forest around 1840 or 1850, and that their successors kept the ash as a "wolf tree" to provide shade for the sheep or cows in what was then pastureland. The forest has been cut over twice since then; most of the surrounding northern hardwood forest is only about 75 years old. There are almost no other ash trees nearby; in 1990 the then-owners harvested the best trees to make money, and ash was a valuable species.

Clearly everyone enjoyed the tour tremendously. Throughout the day, the participants eagerly asked questions and praised Bill's breadth and depth of knowledge and his obvious enthusiasm for these trees. Much to our delight, several non-members on the tour also said that they planned to join WRWA. We are grateful to Bill for leading this tour every two years, and I, for one, am already looking forward to the 2017 installment.

### ***Determining a Tree's Score***

Total score = circumference in inches at 4.5 feet above ground level  
plus height in feet  
plus ¼ average crown spread in feet

## **Remembering Gilbert Cameron (1924–2015)**

*By Bill Guenther, Windham County Forester*

Back in September we were saddened by the passing of Gil Cameron, longtime Windham County Forester, who had reached 90 years and was a day short of his 91st birthday. He faithfully served Windham County from 1951 (a year before I was born!) until the end of 1986. He was only the third Windham County Forester, following Halsey Hicks and Frederic “Buck” Turner.

Gil was very instrumental in the formation of the Southern Vermont Woodland Owners Association, an earlier name of our current Association. He provided technical advice and support and amazingly, was also the Woodlot Tips editor for 45 years.

He was born in Middlebury, Vermont, was educated in the Middlebury school system, and graduated from Middlebury High School in 1943. After service in the U.S. Army Air Force as a PFC during WWII, Gil then went on to attend the College of Environmental Science & Forestry at Syracuse University, earning his bachelor's degree in 1951.

In the Forest Parks & Recreation Department, Gil was known as a man of not many words, but when he did speak, you wanted to listen. He had a great grasp of forestry, and in the days before the Use Value Appraisal program, he directly managed many parcels for private landowners. Gil conducted his affairs with the highest standards of professional ethics and he always inspired me to try to perform at the level he did.

After his retirement, he kept himself very busy with projects on his home and was always out in the forest skiing or hiking. Over in Pisgah State Park he fell on a patch of ice backcountry skiing and broke his femur, but even in his seventies he overcame that and got back into his beloved woods. He and his wife Marie then discovered Nova Scotia's Cape Breton, which has a plethora of incredible hiking trails. They made annual treks up there and after Marie's passing, he continued to make that long drive. I believe he was still making the trip at 86 or 87. During this time, he also was a faithful member of the Pisgah State Park volunteer trail crew and devoted countless hours improving the Park's hiking trails.

Gil was a dedicated member of St. Michael's Catholic Church in Brattleboro. He worked with Rescue, Inc. and was a member of the Outing Club Ski Patrol. He enjoyed swimming in the ocean, skiing and traveling to Nova Scotia. Gil stayed very active and up until about five years ago, he was still hiking on Mt. Pisgah with his dog, cross-country skiing, and working out three times a week.

This past winter I took Gil out for lunch at his favorite eatery, the Chelsea Royal Diner. We had a great time reminiscing and he said that he would be moving over to a retirement community in the Albany area to be closer to one of his daughters. One neat remembrance I mentioned was how he told me during his last week of work he was so excited that after 35 years he had recently done a landowner visit on a road he had never been on before! He sure knew Windham County!

We lost a great man and forester with Gil's passing and I will always fondly remember him. His retirement gave me the opportunity to move here and start a new life and career that has been beyond fulfilling. Thanks Gil!

## Woodland Secret No. 20 — Parasites: Our Woodland Plants That Have Lost It

By Arthur H. Westing, WRWA Trustee

One of the great marvels of the plant kingdom is that its members can, with the help of their green pigment chlorophyll, capture the energy of the sun in order to manufacture their own food. Thus, all of our trees, shrubs, and lianas accomplish this, as do also such other green plants as the many ferns, mosses, club-mosses, grasses, and sedges that contribute to our forest understory and ground cover.

A rather small number of green flowering plants at some time in the distant past somehow learned how to tap into neighboring green plants and extract a supplementary supply of food plus water from it, thereby providing a selective advantage to them. Perhaps those freeloaders were able to accomplish this simply by sharing a mycorrhizal fungus with the other plant. Then at some future time they acquired a mutation that reduced or even prevented their ability to make that crucial energy-capturing component, chlorophyll. In other words, in some more or less mysterious way those flowering plants — now chlorophyll deficient or lacking, but otherwise intact — were clever enough to survive by becoming parasites on appropriate host plants.

The most common of our parasitic woodland flowering plants is the herbaceous perennial Indian pipe (*Monotropa uniflora*); a rather less common one around and about our region is the herbaceous perennial Cancer root [or Squaw root] (*Conopholis americana*); and yet another is the herbaceous annual Beechdrops (*Epifagus virginiana*). All three of those species are dependent for their survival on adjacent living trees: Indian pipes on a rather wide array of trees, both coniferous and deciduous; Cancer roots seem to be limited to oak trees (*Quercus*), but perhaps also manage to utilize beech trees (*Fagus*); and Beechdrops are restricted to beech trees. Oddly, it seems that wildlife show no interest in any of these three flowering plants.

All of our woodland trees live in a symbiotic relationship with root-inhabiting fungi, an obligate

partnership known as the mycorrhizal relationship already referred to above. The roots of those trees exude a hormone (named strigolactone) that serves to attract its needed specific fungus. As to at least two of our noted local woodland flowering-plant parasites, the seeds produced by the Indian pipes and Cancer roots lie dormant in the soil litter, sometimes for years, until they sense that same fungal attractant coming from an appropriate host tree, this triggering their germination and growth. When the developing roots come in contact with the mycorrhizal fungi, projections (known as haustoria) from the parasite's roots thrust themselves into the fungal cells, thenceforth to tap a portion of the food that the fungus has been extracting for itself — the fungi, of course, also being unable to manufacture their own food.

Finally, two other well-known flowering-plant woodland parasites might be mentioned, although neither of them grows in our region (and both do, in fact, produce minor, although insufficient,

amounts of chlorophyll). The first of these parasites is the notorious Dwarf mistletoe (*Arceuthobium spp.*). Different species of Dwarf mistletoe grow on the trunks and branches of most of our important western conifers. This time, the projections (haustoria) of the Dwarf mistletoe roots are able to penetrate through the bark of the host tree to

tap into its vascular systems for both food and water, thereby seriously reducing both its growth and form (including the production of both burls and witch's brooms). The second of these parasites is the somewhat more benign American mistletoe (*Phoradendron leucarpum*). This one grows on the branches of various species of hardwood trees in the Southeast, also adversely affecting their growth and commercial value. However the American mistletoe's saving grace is its use as a Christmas decoration — and also, of course, its property not necessary to be mentioned here that is used by some to their advantage.





## 2015 WRWA Annual Meeting Field Trip

*By Margaret MacDonald*

The Annual Meeting was held at the Kiwanis Pavilion at Living Memorial Park in Brattleboro. Before we set out on our field trip on the 300-acre Smith property adjacent to the park, consulting forester George Weir provided some background, noting that for generations members of the Smith family have been careful forest managers. The Smith property has been a tree farm since the 1970s; George and Halsey Hicks served as the family's consulting foresters beginning in 1973. The current owners, Prentiss and Liz Smith, added 100 acres to the original property. Their management goals are recreation (which means that the forest should look nice) and growing timber for harvest. The area has almost become public use land; the boundaries between the Smith property and the town land are not marked. It also marks the transition from oak-dominated woods to northern hardwood forest.

No timber has been harvested on the town land, so the woods are the oldest in Vermont. George reminded us that Windham County was the first county in Vermont to have a county forester and consulting foresters. It's also the only place in Vermont with the species composition we would see on the field trip: a combination of black and red oak (which probably hybridize), red and white pine, and black birch. George never thought that black birch would be a timber tree, but it now has some value, and deer don't like it. (Cersosimo Lumber built its business on local oak and pine.)

George and WRWA trustee Hayden Lake then guided us along a neatly maintained trail that took us first through park woodlands and then onto the Smith property, where the species composition shifted. The trees exhibit impressive vertical growth because the forest has been thinned many times; in fact, loggers from northern Vermont who saw the property in the past exclaimed: "This must be the best timber lot in Vermont!" George pointed out some beautiful beech trees, and noted that beech grows in dense thickets because it regenerates largely through root sprouting, not from seed. Overall we see a large amount of beech because it is not often harvested for lumber and deer don't browse beech. Smooth bark beech, like the trees on the Smith property, don't usually suffer from beech bark disease; they compartmentalize infections in the outer bark. Problems only occur when

there's an actual opening in the tree; at that point scale insects pierce the bark and fungi enter the tree. The fungi don't kill the tree, but weaken it.

The lumber market drives many decisions about harvesting. Sixty years ago the landowners did not want to cut giant trees, because there was little market for them; sawmills have difficulty handling trees with a diameter of more than 30 inches. Therefore, George now manages the property on the principle of taking down trees that in 10–15 years would grow to over 30 inches in diameter and become less marketable. Growth rates also taper off when trees get to that diameter, but trees could double in volume in 10 years. He pointed out a large amount of hemlock regeneration, with some poor-quality red pine mixed in; he would like to cut the pine, but there's no market for them because the pine pulp markets have collapsed. As a result, he has had to leave trees that he would have taken last year, when the markets were better.

The species composition also reflects previous land use patterns. White pine grows in areas that were formerly farmland, because it regenerates well in grass. By contrast, hemlocks grow in areas that probably were shaded, because hemlock rarely starts on open land. In addition, previous property owners left many pines because they did not use pine as firewood, fearing creosote buildup in chimneys. Some of the pines suffered from white pine weevil, which was brought in from the Lake States; the Smiths got rid of it through logging and timber stand improvement.

Looking at the ground gives us a good way to evaluate the future of the forest — we can see what is coming up. George always tries to maintain species diversity in a woodland and to manage for contingencies, such as minimizing damage if a windstorm occurs. He would like to maintain the present conditions on the property as long as possible, because future conditions will probably be worse. Global warming will likely redistribute the current composition. George believes that the next stage will include more hemlock, black birch, beech, and hophornbeam, with sugar maple growing on eastern slopes, and oak and beech on western slopes. The property could be a maple source in 100 years. George pointed out that one maple

can colonize a large area, because the seeds can travel 100 feet.

### ***Updates on Current Use Program***

When we returned from our walk, Grillmeister Sam Schneski again prepared hot dogs and hamburgers for us. Then, reverting to his County Forester role, Sam reviewed recent changes to the Current Use program (also see article by Bill Guenther in the Summer 2015 issue of *Woodlot Tips*). While some people have expressed concern that landowners might try to take advantage of the Easy Out option simply to avoid paying property tax, George Weir doubts that much land is being taken out of Current Use; he has seen only one person use Easy Out.

### ***Invasive Insect Update***

Next, Jim Esden, forest protection specialist with the Vermont Department of Forests, Parks, and Recreation (FPR), updated us on his department's key messages about the "big three" invasive insects. The first message, "Look Up, Vermont!" encourages people to do exactly that: Know what our forests should look like, and report signs of insect damage, since early detection leads to rapid response. The second is "Don't Move Firewood." People should buy and burn wood locally—meaning within 50 miles of their location. Third, FPR, together with the University of Vermont (UVM) Extension and the Vermont Chapter of The Nature Conservancy, has established a new clearinghouse for information: Vermont Invasives. Its website, <http://www.vtinvasives.org>, guides Vermonters on how to identify the emerald ash borer (and ash trees!) and how to report sightings. The clearinghouse also distributes resources, such as posters that can be displayed in local stores, and printed materials. Jim then gave a more detailed report on each insect.

*Hemlock Woolly Adelgid (HWA)*: Unfortunately, Windham County is Vermont's hot spot for HWA, which causes stand decline. HWA reproduces asexually and has two generations a year: one HWA can lay 300 eggs, and each of the offspring can lay 100 before the next winter. Further south, HWA has killed trees in three years, but the relatively good news is that our trees seem more resilient. We've had HWA in the county for eight years and no tree mortality has been attributed exclusively to HWA. Our colder winter temperatures may make the difference; the winter of 2014/2015 saw 97–99 percent HWA winter mortality. Inter-

estingly, what seems to harm the hemlocks in New England is their over-reaction to HWA feeding; western hemlocks are less sensitive and survive more easily. Elongate hemlock scale (EHS) has also been detected in Guilford and Brattleboro; trees affected by both EHS and HWA are at far greater risk.

The state strategy is to slow the spread through regulation, public education, and limited biocontrol (but biocontrols are not available to the public). Exotic predator beetles that only eat HWA have been introduced in Brattleboro, Vernon, and Pownal. In addition, research at UVM has found that silver fly larvae are HWA predators. Researchers are also trying to weaponize some native insect-killing fungi and place the spores on infected branches, but the spores have little staying power.

*Asian Longhorned Beetle (ALB)*: The Worcester infestation of ALB is still the closest to us. ALB prefers maple, and doesn't really like oak. Worcester has quarantined 110 square miles and is now conducting its second round of inspection. The government believes the infestation is contained, but inspectors have found newly infected trees within the quarantined area. Cut and chip is the only way to deal with ALB.

ALB can be identified by the coarse frass (excrement) it produces, and by its perfectly round exit holes. The beetles perform a "head dance" as they chew their way out of a tree; their mandibles move in and out and one can see the mandible marks on the sides of the tunnels. The egg-laying niches also have an X-shaped crack at the bottom.

*Emerald Ash Borer (EAB)*: While EAB has not been found in Vermont, it has appeared in all neighboring states, and new discoveries have recently been made in New Hampshire. Firewood is clearly an important vector: 80 percent of recent finds are correlated with campgrounds. At its natural rate of spread EAB can move a half mile per year. This year researchers in Ohio have found that white fringetree is also susceptible to EAB.

EAB makes S-shaped galleries directly under the bark, and its exit holes are D-shaped. To combat EAB, Vermonters should look for early discoloration of foliage and branch dieback, as well as epicormic sprouting, splits in bark, and woodpecker damage, sometimes called "blonding."

Jim noted that HWA is not a federally regulated pest, so FPR has limited sources for control activities. However, programs to combat ALB and EAB are federally funded and run by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS).

### ***Combating Woody Invasives***

Our last speaker, Gerry Hawkes, manager of Forest Savers® LLC, showed us the customized forestry tractor that he designed as an effective way to eradicate woody invasives without using herbicides. A major advantage of using mechanical means to remove woody invasives is that ecological, economic and aesthetic benefits as well as any risks are apparent immediately, whereas the full effects of herbicides may not appear for years. With this tractor, he can uproot the plants first and then shred them, which minimizes resprouting. If the invasive shrubs and trees are not uprooted first, the shredder on the back of the tractor takes the plants right down to the ground, leaving no stumps.

The tractor has a bi-directional clearing rake for uprooting woody invasives two inches or more in diameter, as well as moving rocks, smoothing rough ground, and raking up brush and debris. A heavy-duty shredder (weighing 2,100 pounds) does an excellent job cutting and mulching brush and trees up to a foot in diameter, yet it can also mow grass and weeds as well as most bush hogs. Gerry can switch the teeth to optimize for chipping or all-purpose use on rocky sites or where it is desirable to till the surface of the ground. Log tongs may be attached to the bi-directional rake and a



*Forest Savers' custom-built tractor*

video camera in the cabin lets the operator monitor the setting and release of the tongs. The tractor also has tire chains (with round rings that minimize soil disturbance or damage to lawns and pavement), unloaded eight-ply tires, and coiled springs in the well casings in the back to float the shredder over the ground and transfer traction to the rear wheels. The tractor with shredder and clearing rake is small enough to work well between trees and near homes and to be easily transported behind a three-quarter-ton pickup, yet has enough power to be highly efficient.

Forest Savers also uses a four million BTU/hour flame-thruster system in places that the tractor can't reach. Flame works best on multiflora rose, barberry, and honeysuckle.

Gerry has worked on this equipment for 12 years. He now wants to organize franchising, leaving him more free time for invention (he has several patents and businesses). To see videos of the tractor in action, and learn more about Forest Savers, go to <http://www.forest-savers.com>.

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## **WRWA Annual Meeting Minutes**

*September 19, 2015*

The meeting was brought to order at 9:45 a.m. by President Sam Rowley.

### **Proposed Bylaws Revision**

Trustee Linda Lyon described the process of revising the bylaws. The language in the current bylaws was made clearer, more readable and understandable. Information in the bylaws about the organization's purpose was drawn from the Articles of Incorporation. The bylaws were then reviewed line-by-line to better reflect the actual working of the organization. A few substantive changes were

made; the Annual Meeting date, rules for memberships, and rules for trustees were made more accurate, and a non-discrimination clause was added.

### **Amendments proposed and accepted by voice vote at the meeting:**

- Article 5, section 3 – “most of the Board” was amended to “a majority of the Board.”
- Article 6, section 3, 3.2 – a superfluous “in the” was removed
- Article 7, section 1 – “if feasible” was removed

Re: Article 6, section 3.3 – Trustee Marli Rabinowitz suggested that once a year the Treasurer’s accounting books be reviewed by a third party. George Weir suggested that the Board look into having all WRWA checks signed by two people, e.g., the Treasurer and the President. Bylaws do not need to be changed to allow these practices, because the section includes the phrase “as the Board directs.” Treasurer Phyllis Weltz suggested adding to the section, “At least once a year, a person designated by the Board will review the accounts and report the findings at the Annual Meeting.”

The Board of Trustees will work out the details of these suggestions at their next meeting. So voted.

Re: Article 6, sections 1 and 2, there are several ambiguities in descriptions of the Clerk and Secretary positions. The Board will review State guidelines on language related to the clerk and officers and suggest minor amendments to the bylaws to be voted on at next year’s Annual Meeting.

The membership voted unanimously to accept the bylaws with amendments.

Sam Rowley thanked the organizers of the Annual Meeting.

Phyllis Weltz presented the Treasurer’s Report. The Treasurer’s Report was accepted as presented. Sam reported that no new Trustees had been nominated. He asked members to contact WRWA if they are interested in serving on the Board. Arthur Westing volunteered to serve, and was accepted by voice vote.

**Newsletter** – Barbara Evans, our current newsletter editor, wishes to hand the task over to a new editor. She is happy to train her successor. Please contact WRWA with suggestions for a new editor.

**Scholarship Fund** – WRWA is currently supporting two students.

Sam Rowley reminded members to recruit new members among neighbors and friends.

Linda reminded members that any member can belong to a committee, and asked members to consider joining a committee. New ideas are so useful!

The meeting was adjourned at 10:30 a.m.

Respectfully submitted,  
Carol R. Morrison, *Clerk*

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## Our Library's New Location

We wish to remind you that the WRWA Library contains dozens of useful woodland-related books, reports, and similar materials that are freely available for use by the WRWA membership.

We are most grateful to the Vermont Learning Collaborative to now be able to house our Library at its facility, conveniently located at 471 Route 5 in Dummerston, open Monday through Thursday from noon to 5 pm. Any of the materials can be borrowed on the honor system for up to three weeks.

If you have items to donate to the Library, please email Carol Morrison at [windhamwoodlands@gmail.com](mailto:windhamwoodlands@gmail.com) and the Library Committee will be in touch with you.

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## Windham Regional Woodlands Association Trustees 2016–2018

John Caveny, Brattleboro  
Bob DeSiervo, Townshend  
Dan Healey, Brattleboro  
Aaron Hurst, Springfield  
Hayden Lake, Putney  
Linda Lyon, Brattleboro  
Marli Rabinowitz, Guilford  
Sam Rowley, President, Brattleboro  
Ross Thurber, Brattleboro  
Willem van Loon, Vice President, Guilford  
Phyllis Weltz, Treasurer, Bellows Falls  
Arthur Westing, Putney

The Windham Regional Woodlands Association trustees serve a three-year term of office and meet quarterly. Trustees can serve a total of two consecutive terms before having to step aside for at least one year.

Just as our new name conveys the larger geographical distribution of the membership, it is no longer a requirement that members be woodlot owners. Our mission statement (see bottom of last page) clearly states that the Association's areas of interest are biodiversity; clean air and water; cultural and historic resources; fair and equitable taxation of woodland; forest products; recreation; scenic beauty; and wildlife habitat.

If current members have friends who share any of these interests, please encourage them to think about volunteering as a trustee or committee member. The programs and field trips are fun and informative, and the expertise of those who care about the welfare of Vermont's forests and environment, from responsible forest management to vernal pools to wildlife, is welcome.

Please have interested friends email [windhamwoodlands@gmail.com](mailto:windhamwoodlands@gmail.com) to learn more.

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**Windham Regional Woodlands Association**  
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Brattleboro, VT 05301-7040

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CHANGE SERVICE REQUESTED

**Upcoming Programs**  
*(See inside for details)*

<b>Friday, January 8, 1–3:30 p.m.</b>	<b>Timber Harvest Tour at Molly Stark State Park</b>
<b>Saturday, Feb. 20, at 10 a.m.</b>	<b>Winter Tree ID Walk and Potluck Lunch</b>
<b>Friday, March 4, at 7 p.m.</b>	<b>The Birds in Your Woods: How You Can Help Them</b>
<b>Saturday, March 19</b>	<b>SAVE THE DATE — Annual Sugarhouse Tour</b>
<b>Saturday March 19</b>	<b><i>WRWA Members Only Field Trip: Somerset Old Growth Forest</i></b>
<b>Saturday, April 23, at 8:45 a.m.</b>	<b>Excursion to the Harvard Forest, Petersham, Mass.</b>
<b>Monday, May 23, at 7 p.m.</b>	<b>Riparian Woodlands: Managing this Very Special Habitat</b>

*Mission of Windham Regional Woodlands Association*

WRWA is a non-profit association of woodland owners and managers, members of the wood products industry, and other interested parties in the Windham County Region who advocate both sustainable management practices and the enjoyment of forests and their ecosystems. In support of these ends, WRWA offers educational opportunities for all age groups. Areas of interest include: biodiversity; clean air and water; cultural and historic resources; fair and equitable taxation of woodland; forest products; recreation; scenic beauty; and wildlife habitat. We recognize that these concepts are continually evolving and therefore will strive to consider the most current thinking and values regarding them.